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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/801,309	03/07/2001	Raymond Severt Barsness	ROC920010075US1	2651
7590 10/29/2007 IBM Corporation Intellectual Property Law, Dept. 917 3605 Highway 52 North Rochester, MN 55901			EXAMINER DUONG, THOMAS	
			ART UNIT 2145	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/801,309

Applicant(s)

BARSNESS ET AL.

Examiner

Thomas Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-11, 13-17, and 19-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-11, 13-17, and 19-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This office action is in response to the Applicants' Appeal Brief filed on July 2, 2007. *Claims 1-5, 7-11, 13-17, and 19-26* are presented for further consideration and examination.
2. Applicants' request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.
3. In view of the Appeal Brief filed on July 2, 2007, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

Response to Argument

4. Applicants' arguments, see pg.10–pg.14, filed on July 2, 2007, with respect to *claims 1-5, 7-11, 13-17, and 19-26* have been fully considered and are persuasive. The finality of previous rejection is withdrawn.

Claim Objections

5. Claim 7 is objected to because of the following informalities:
 - “*change incitation*”. The Examiner assumes that this is a misspelled word. During the course of prosecution, the Examiner will treat as such. Please make the appropriate correction.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-5, 7-11, 13-17, and 19-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Skinner et al. (US006721740B1), in view of Collins (US005963951A), and in view of Salam et al. (US006594654B1).

8. With regard to claim 1, Skinner discloses,

- *a subject*; (Skinner, col.1, line 6 – col.26, line 13)

Skinner discloses, *"As represented by line 310, application server 307 is coupled to database server 311 to exchange database calls and data. It is also possible in some embodiments for additional servers to be coupled to application server 307 for the exchange of enterprise data. Within the client and application tiers, data is maintained in the form of data objects. Application server 307 maintains a set of objects containing data for the clients it serves. Clients 300A and 300B each maintain a subset of objects containing data for their respective user needs. Application server 307 is responsible for transforming data from the format of database server 311 into the form of data objects, and, similarly, from the form of data objects into the format of database server 311. Additionally, queries are transformed from a general query object format into the particular query format*

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expected by database server 311, such as SQL” (Skinner, col.14, lines 16-31).

Hence, Skinner teaches of the application server 307 (i.e., Applicants' subject).

- *an observer adapted to generate configuration information, the configuration information comprising an attribute of the observer; and* (Skinner, col.1, line 6 – col.26, line 13)

Skinner discloses, *“Within the client and application tiers, data is maintained in the form of data objects. Application server 307 maintains a set of objects containing data for the clients it serves. Clients 300A and 300B each maintain a subset of objects containing data for their respective user needs. Application server 307 is responsible for transforming data from the format of database server 311 into the form of data objects, and, similarly, from the form of data objects into the format of database server 311. Additionally, queries are transformed from a general query object format into the particular query format expected by database server 311, such as SQL” (Skinner, col.14, lines 21-31).*

Skinner discloses, *“Client-side application logic and GUI component 301A provides the software mechanism by which the user is able to view the data and other output associated with a particular application, to generate input in the form of additions, deletions and modifications of data, and to otherwise exert control over the data and format of what is displayed. Client-side application logic and GUI component 301A interfaces with client-side change management component 302A, client-side object cache component 303A, client-side update management component 304A and client-side query management component 312A” (Skinner, col.14, lines 50-60).* Hence, Skinner teaches of the user utilizing the client 300A (i.e., Applicants' observer) to create (i.e., Applicants' generate) by generating

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input and to maintain subset of objects (i.e., Applicants' configuration information) containing data for the user's needs.

- *an aspect object created by the observer and adapted for attachment to the subject, the aspect object further adapted to receive the configuration information from the observer and to selectively communicate the update information to the observer based on the configuration information.* (Skinner, col.1, line 6 – col.26, line 13)

Skinner discloses, "FIG. 5A comprises root node 500, which is coupled to a Client A interest object, a Client B interest object and a Client C/Server X interest object. The Client C/Server X interest object refers to an interest object registered with root node 500 for a third client ("Client C") or another application server ("Server X"). The respective client or server, or a component acting on behalf of the client or server, is registered as an observer of the respective interest object. A group of interest objects 501 are registered under the Client A interest object; a group of interest objects 502 are registered under the Client B interest object, and a group of interest objects 503 are registered under the Client C/Server X interest object. Interest objects for components within the subject application server (i.e., the server containing the present server interest registry) may register with root node 500, and extend via sub-interests. However, interest objects for components of the subject application server are not shown in FIG. 5A for clarity" (Skinner, col.10, lines 47-65). Hence, Skinner teaches of interest objects (e.g., Client A interest object, Client B interest object) (i.e., Applicants' aspect object) are registered (i.e., Applicants' created) and coupled (i.e., Applicants' adapted for attachment) to root node 500 within the subject

application server (i.e., Applicants' subject) by the user via the clients A and B, respectively. Skinner discloses, "*Client-side application logic and GUI component 301A provides the software mechanism by which the user is able to view the data and other output associated with a particular application, to generate input in the form of additions, deletions and modifications of data, and to otherwise exert control over the data and format of what is displayed. Client-side application logic and GUI component 301A interfaces with client-side change management component 302A, client-side object cache component 303A, client-side update management component 304A and client-side query management component 312A*" (Skinner, col.14, lines 50-60). Hence, Skinner teaches of the user utilizing the client 300A (i.e., Applicants' observer) to create or modify (i.e., Applicants' generate) by generating input and to maintain subset of objects (i.e., Applicants' configuration information) containing data for the user's needs.

However, Skinner does not explicitly disclose,

- *an observer adapted to generate configuration information, the configuration information comprising an attribute of the observer; and*

Collins teaches,

- *an observer adapted to generate configuration information, the configuration information comprising an attribute of the observer; and* (Collins, col.1, line 6 – col.16, line 10)

Collins discloses, "*The system 100 also collects personal information from the user. In the case of telephone access to the system, this information is obtained, for example, by asking the user to press various keys on the telephone keypad to*

indicate answers to questions asked through the VRU 122. In the case of access via the network 104, the user's information is entered using any known manner using a typical browser application. The personal information obtained can include, but is not limited to, the user's age, sex, the user's gender preference (including "couples"), the user's first name, race, hair color, build of body, and location including city and zip code. The system will also obtain from the user a goal which can be one of "romance," "friendship," "a walk on the wild side," and the like. The system 100 provides the user with a system phone number for a personal voice mail box; voice mail box number" (Collins, col.5, lines 37-48).

Hence, Collins teaches of the system 100 (i.e., Applicants' subject) obtaining (i.e., Applicants' generate) personal information (i.e., Applicants' configuration information) that includes (i.e., Applicants' comprising) the age, sex, first name, race, hair color, etc (i.e., Applicants' attribute) of the user via the user interface (i.e., Applicants' observer).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Collins with the teachings of Skinner "to provide an on-line dating service that always provides users with the ability to perform searches based on user-specified criteria, including location criteria. It is still further desirable to provide an on-line dating service that provides users with at least some search results, regardless of what search criteria they specify" (Collins, col.2, lines 21-28). Skinner discloses, "A method and apparatus of performing active update notification is described. Components of an application are able to specify interest in a data object or set of data objects by registering an interest object with an update management component of the application. The

interest object specifies the interested application component, as well as the identity of one or more data objects or an attribute value or range of values to associate with data objects. When modifications are made to data objects corresponding to the registered interest objects, the interested application component or components receive an update notification from the update management component” (Skinner, col.2, lines 54-65).

However, Skinner and Collins do not explicitly disclose,

- *an aspect object created by the observer and adapted for attachment to the subject, the aspect object further adapted to receive the configuration information from the observer and to selectively communicate the update information to the observer based on the configuration information.*

Salam teaches,

- *an aspect object created by the observer and adapted for attachment to the subject, the aspect object further adapted to receive the configuration information from the observer and to selectively communicate the update information to the observer based on the configuration information. (Salam, col.1, line 8 – col.36, line 15)*

Salam discloses, “More particularly described, the present invention provides a system and methods for accumulating and displaying information items obtained via a computer network such as the Internet and World Wide Web (WWW). The system provides a plurality of selectable expert topics, each expert topic comprising one or more network computer accessible sources of information. A user inputs a user search request, a selection of one of the plurality of expert topics, and update schedule information as to when the user wishes to receive

automatic updates to their search. The user search request, a selection of one of the plurality of expert topics, and update schedule information are stored at a web site server" (Salam, col.4, lines 6-17). Hence, Salam teaches of the system transmitting (i.e., Applicants' communicate) updates (i.e., Applicants' update information) to the user (i.e., Applicants' observer) based on (i.e., Applicants' selectively) the search request and the update schedule information (i.e., Applicants' configuration).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Salam with the teachings of Skinner and Collins *"to provide an on-line dating service that always provides users with the ability to perform searches based on user-specified criteria, including location criteria. It is still further desirable to provide an on-line dating service that provides users with at least some search results, regardless of what search criteria they specify"* (Collins, col.2, lines 21-28). Skinner discloses, *"A method and apparatus of performing active update notification is described. Components of an application are able to specify interest in a data object or set of data objects by registering an interest object with an update management component of the application. The interest object specifies the interested application component, as well as the identity of one or more data objects or an attribute value or range of values to associate with data objects. When modifications are made to data objects corresponding to the registered interest objects, the interested application component or components receive an update notification from the update management component"* (Skinner, col.2, lines 54-65). Salam discloses, *"Therefore, there is a need for a searching tool that is directed to the problems of finding too*

much irrelevant information on the Internet as well as managing the volume of information that a user gathers on the Internet” (Salam, col.3, lines 36-40).

9. With regard to claims 2-3, Skinner, Collins, and Salam disclose,

- *wherein the configuration information includes a desired type indication (Skinner, col.1, line 6 – col.26, line 13; Collins, col.1, line 6 – col.16, line 10; Salam, col.1, line 8 – col.36, line 15)*

Skinner discloses, *“Client-side communication management component 305A provides the software mechanism by which objects and method calls are transmitted between the client (300A or 300B) and application server 307. In accordance with an embodiment of the invention, objects that may be transmitted between the client and application tiers are configured with metadata describing the elements of the object, such as the attribute names and types, methods, etc. Objects configured with metadata can be serialized, that is, broken down into a set of data bytes containing the metadata descriptions and object state which may later be reconstituted (i.e., “deserialized”) by the same or a different application to generate a copy of the original object” (Skinner, col.16, lines 21-33).*

- *wherein the aspect object selectively discards the update information in response to the desired type indication. (Skinner, col.1, line 6 – col.26, line 13; Collins, col.1, line 6 – col.16, line 10; Salam, col.1, line 8 – col.36, line 15)*

Skinner discloses, *“In accordance with an embodiment of the invention, for a multi-tier application, update notifications are filtered at each tier by an interest registry. Update notifications traverse the interest registry, and are evaluated*

against the interest criteria of each interest object. Where the interest criteria are not met, the update notification is halted in its traverse of the given branch of the registry and discarded. Where the interest criteria is satisfied, the update notification is passed on to the next interest object(s) in the given branch (e.g., those interest objects registered as sub-interests of the current interest object). Where application components are registered as observers of an interest object, satisfaction of the interest criteria results in transmission of an update notification to the registered application components at the time the transaction completes" (Skinner, col.10, lines 25-39).

10. With regard to claims 4-5 and 7-8, Skinner, Collins, and Salam disclose,

- *wherein the attribute of the observer includes a communication speed indication.*

(Skinner, col.1, line 6 – col.26, line 13; Collins, col.1, line 6 – col.16, line 10;

Salam, col.1, line 8 – col.36, line 15)

Skinner discloses, "Referring now to FIG. 10, the scheduled dispatch engine 1000 will be described. This engine is operative for scheduling updated searches in accordance with schedule information stored in the stored searches database 219. Schedule information is typically input from the user via the input process of FIG. 3 (e.g. see FIG. 21 for a page that allows input of user notification options in the form of a frequency of search updating). For example, the user may choose to receive updated search results periodically in daily, weekly, or monthly increments. The reader should appreciate that the user may enter the scheduling input during the initial search request or after receiving the initial search results, or may change the update frequency at any time. Moreover, if the user does not

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choose any scheduling input, a default update schedule may be used” (Salam, col.27, lines 7-21).

- *further comprising an accumulator that accumulates the update information in response to the communication speed indication. (Skinner, col.1, line 6 – col.26, line 13; Collins, col.1, line 6 – col.16, line 10; Salam, col.1, line 8 – col.36, line 15)*
- *wherein the subject generates the state change indication and communicates the state change indication to the aspect object. (Skinner, col.1, line 6 – col.26, line 13; Collins, col.1, line 6 – col.16, line 10; Salam, col.1, line 8 – col.36, line 15)*
- *further comprising a preprocessor that selectively modifies the update information in response to the configuration information. (Skinner, col.1, line 6 – col.26, line 13; Collins, col.1, line 6 – col.16, line 10; Salam, col.1, line 8 – col.36, line 15)*

Salam discloses, “More particularly described, the present invention provides a system and methods for accumulating and displaying information items obtained via a computer network such as the Internet and World Wide Web (WWW). The system provides a plurality of selectable expert topics, each expert topic comprising one or more network computer accessible sources of information. A user inputs a user search request, a selection of one of the plurality of expert topics, and update schedule information as to when the user wishes to receive automatic updates to their search. The user search request, a selection of one of the plurality of expert topics, and update schedule information are stored at a web site server” (Salam, col.4, lines 6-17).

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11. With regard to claim 9, Skinner, Collins, and Salam disclose,

- *further comprising:*
 - *a first processor; a first memory coupled to the first processor, wherein the subject and the transmission manager reside within the first memory; a second processor; and a second memory coupled to the second processor, wherein the observer resides within the second memory.*
(Skinner, col.1, line 6 – col.26, line 13; Collins, col.1, line 6 – col.16, line 10; Salam, col.1, line 8 – col.36, line 15)

12. With regard to claim 10, Skinner discloses,

- *a) a subject code segment resident on a first computer node, the subject code segment adapted to produce an update message; (Skinner, col.1, line 6 – col.26, line 13)*

Skinner discloses, “A method and apparatus of performing active update notification is described. Components of an application are able to specify interest in a data object or set of data objects by registering an interest object with an update management component of the application. The interest object specifies the interested application component, as well as the identity of one or more data objects or an attribute value or range of values to associate with data objects. When modifications are made to data objects corresponding to the registered interest objects, the interested application component or components receive an update notification from the update management component” (Skinner, col.2, lines 54-65). Hence, Skinner teaches of the update management component (i.e., Applicants’ subject code segment) stored on (i.e., Applicants’

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resident on) the application server 307 (i.e., Applicants' first computer node) capable of sending (i.e., Applicants' adapted to produce) notifications (i.e., Applicants' update message).

- *b) an observer resident on a second computer node, the first computer node being in operable communication with the second computer node; and (Skinner, col.1, line 6 – col.26, line 13)*

Skinner discloses, *"Within the client and application tiers, data is maintained in the form of data objects. Application server 307 maintains a set of objects containing data for the clients it serves. Clients 300A and 300B each maintain a subset of objects containing data for their respective user needs. Application server 307 is responsible for transforming data from the format of database server 311 into the form of data objects, and, similarly, from the form of data objects into the format of database server 311. Additionally, queries are transformed from a general query object format into the particular query format expected by database server 311, such as SQL"* (Skinner, col.14, lines 21-31).

Skinner discloses, *"Client-side application logic and GUI component 301A provides the software mechanism by which the user is able to view the data and other output associated with a particular application, to generate input in the form of additions, deletions and modifications of data, and to otherwise exert control over the data and format of what is displayed. Client-side application logic and GUI component 301A interfaces with client-side change management component 302A, client-side object cache component 303A, client-side update management component 304A and client-side query management component 312A"* (Skinner, col.14, lines 50-60). Hence, Skinner teaches of the user utilizing the client 300A

(i.e., Applicants' observer) stored on (i.e., Applicants' resident on) computer 300 (i.e., Applicants' second computer node) to create (i.e., Applicants' generate) by generating input and to maintain subset of objects (i.e., Applicants' configuration information) containing data for the user's needs. Skinner teaches of the client 300A (i.e., Applicants' observer) stored on (i.e., Applicants' resident on) computer 300 (i.e., Applicants' second computer node) is coupled to the application server 307 (i.e., Applicants' first computer node) to exchange (i.e., Applicants' being in operable communications) method calls and data.

- c) an aspect object created by the observer and attached to the subject code segment, the aspect object configured to receive the update message from the subject code segment and to selectively communicate update information to the observer based at least in part upon an attribute of the observer and the received information. (Skinner, col.1, line 6 – col.26, line 13)

Skinner discloses, "FIG. 5A comprises root node 500, which is coupled to a Client A interest object, a Client B interest object and a Client C/Server X interest object. The Client C/Server X interest object refers to an interest object registered with root node 500 for a third client ("Client C") or another application server ("Server X"). The respective client or server, or a component acting on behalf of the client or server, is registered as an observer of the respective interest object. A group of interest objects 501 are registered under the Client A interest object; a group of interest objects 502 are registered under the Client B interest object, and a group of interest objects 503 are registered under the Client C/Server X interest object. Interest objects for components within the subject application server (i.e., the server containing the present server interest registry)

may register with root node 500, and extend via sub-interests. However, interest objects for components of the subject application server are not shown in FIG. 5A for clarity" (Skinner, col.10, lines 47-65). Hence, Skinner teaches of interest objects (e.g., Client A interest object, Client B interest object) (i.e., Applicants' aspect object) are registered (i.e., Applicants' created) and coupled (i.e., Applicants' adapted for attachment) to root node 500 within the subject application server (i.e., Applicants' subject) by the user via the clients A and B, respectively. Skinner discloses, "*Client-side application logic and GUI component 301A provides the software mechanism by which the user is able to view the data and other output associated with a particular application, to generate input in the form of additions, deletions and modifications of data, and to otherwise exert control over the data and format of what is displayed. Client-side application logic and GUI component 301A interfaces with client-side change management component 302A, client-side object cache component 303A, client-side update management component 304A and client-side query management component 312A*" (Skinner, col.14, lines 50-60). Hence, Skinner teaches of the user utilizing the client 300A (i.e., Applicants' observer) to create or modify (i.e., Applicants' generate) by generating input and to maintain subset of objects (i.e., Applicants' configuration information) containing data for the user's needs.

However, Skinner does not explicitly disclose,

- *c) an aspect object created by the observer and attached to the subject code segment, the aspect object configured to receive the update message from the subject code segment and to selectively communicate update information to the*

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observer based at least in part upon an attribute of the observer and the received information.

Collins teaches,

- *c) an aspect object created by the observer and attached to the subject code segment, the aspect object configured to receive the update message from the subject code segment and to selectively communicate update information to the observer based at least in part upon an attribute of the observer and the received information. (Collins, col.1, line 6 – col.16, line 10)*

Collins discloses, “The system 100 also collects personal information from the user. In the case of telephone access to the system, this information is obtained, for example, by asking the user to press various keys on the telephone keypad to indicate answers to questions asked through the VRU 122. In the case of access via the network 104, the user's information is entered using any known manner using a typical browser application. The personal information obtained can include, but is not limited to, the user's age, sex, the user's gender preference (including "couples"), the user's first name, race, hair color, build of body, and location including city and zip code. The system will also obtain from the user a goal which can be one of "romance," "friendship," "a walk on the wild side," and the like. The system 100 provides the user with a system phone number for a personal voice mail box; voice mail box number” (Collins, col.5, lines 37-48).

Hence, Collins teaches of the system 100 (i.e., Applicants' subject) obtaining (i.e., Applicants' generate) personal information (i.e., Applicants' configuration information) that includes (i.e., Applicants' comprising) the age, sex, first name,

race, hair color, etc (i.e., Applicants' attribute) of the user via the user interface (i.e., Applicants' observer).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Collins with the teachings of Skinner *"to provide an on-line dating service that always provides users with the ability to perform searches based on user-specified criteria, including location criteria. It is still further desirable to provide an on-line dating service that provides users with at least some search results, regardless of what search criteria they specify"* (Collins, col.2, lines 21-28). Skinner discloses, *"A method and apparatus of performing active update notification is described. Components of an application are able to specify interest in a data object or set of data objects by registering an interest object with an update management component of the application. The interest object specifies the interested application component, as well as the identity of one or more data objects or an attribute value or range of values to associate with data objects. When modifications are made to data objects corresponding to the registered interest objects, the interested application component or components receive an update notification from the update management component"* (Skinner, col.2, lines 54-65).

However, Skinner and Collins do not explicitly disclose,

- c) *an aspect object created by the observer and attached to the subject code segment, the aspect object configured to receive the update message from the subject code segment and to selectively communicate update information to the observer based at least in part upon an attribute of the observer and the received information.*

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Salam teaches,

- *c) an aspect object created by the observer and attached to the subject code segment, the aspect object configured to receive the update message from the subject code segment and to selectively communicate update information to the observer based at least in part upon an attribute of the observer and the received information.* (Salam, col.1, line 8 – col.36, line 15)

Salam discloses, “More particularly described, the present invention provides a system and methods for accumulating and displaying information items obtained via a computer network such as the Internet and World Wide Web (WWW). The system provides a plurality of selectable expert topics, each expert topic comprising one or more network computer accessible sources of information. A user inputs a user search request, a selection of one of the plurality of expert topics, and update schedule information as to when the user wishes to receive automatic updates to their search. The user search request, a selection of one of the plurality of expert topics, and update schedule information are stored at a web site server” (Salam, col.4, lines 6-17). Hence, Salam teaches of the system transmitting (i.e., Applicants’ communicate) updates (i.e., Applicants’ update information) to the user (i.e., Applicants’ observer) based on (i.e., Applicants’ selectively) the search request and the update schedule information (i.e., Applicants’ configuration).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Salam with the teachings of Skinner and Collins “to provide an on-line dating service that always provides users with the ability to perform searches based on user-specified criteria, including

location criteria. It is still further desirable to provide an on-line dating service that provides users with at least some search results, regardless of what search criteria they specify" (Collins, col.2, lines 21-28). Skinner discloses, "A method and apparatus of performing active update notification is described. Components of an application are able to specify interest in a data object or set of data objects by registering an interest object with an update management component of the application. The interest object specifies the interested application component, as well as the identity of one or more data objects or an attribute value or range of values to associate with data objects. When modifications are made to data objects corresponding to the registered interest objects, the interested application component or components receive an update notification from the update management component" (Skinner, col.2, lines 54-65). Salam discloses, "Therefore, there is a need for a searching tool that is directed to the problems of finding too much irrelevant information on the Internet as well as managing the volume of information that a user gathers on the Internet" (Salam, col.3, lines 36-40).

13. With regard to claim 11, Skinner, Collins, and Salam disclose,
 - *wherein the subject code segment comprises a network management software program, and wherein the observer code segment comprises a graphical user interface. (Skinner, col.1, line 6 – col.26, line 13; Collins, col.1, line 6 – col.16, line 10; Salam, col.1, line 8 – col.36, line 15)*
14. With regard to claims 13, 19, and 23, Skinner discloses,

- *in an observer, generating instructions to create an aspect object. (Skinner, col.1, line 6 – col.26, line 13)*

Skinner discloses, *"FIG. 5A comprises root node 500, which is coupled to a Client A interest object, a Client B interest object and a Client C/Server X interest object. The Client C/Server X interest object refers to an interest object registered with root node 500 for a third client ("Client C") or another application server ("Server X"). The respective client or server, or a component acting on behalf of the client or server, is registered as an observer of the respective interest object. A group of interest objects 501 are registered under the Client A interest object; a group of interest objects 502 are registered under the Client B interest object, and a group of interest objects 503 are registered under the Client C/Server X interest object. Interest objects for components within the subject application server (i.e., the server containing the present server interest registry) may register with root node 500, and extend via sub-interests. However, interest objects for components of the subject application server are not shown in FIG. 5A for clarity"* (Skinner, col.10, lines 47-65). Hence, Skinner teaches of interest objects (e.g., Client A interest object, Client B interest object) (i.e., Applicants' aspect object) are registered (i.e., Applicants' created) and coupled (i.e., Applicants' adapted for attachment) to root node 500 within the subject application server (i.e., Applicants' subject) by the user via the clients A and B, respectively. Skinner discloses, *"Client-side application logic and GUI component 301A provides the software mechanism by which the user is able to view the data and other output associated with a particular application, to generate input in the form of additions, deletions and modifications of data, and*

to otherwise exert control over the data and format of what is displayed. Client-side application logic and GUI component 301A interfaces with client-side change management component 302A, client-side object cache component 303A, client-side update management component 304A and client-side query management component 312A” (Skinner, col.14, lines 50-60). Hence, Skinner teaches of the user utilizing the client 300A (i.e., Applicants’ observer) to create or modify (i.e., Applicants’ generate) by generating input and to maintain subset of objects (i.e., Applicants’ configuration information) containing data for the user’s needs.

- *communicating configuration information from the observer to the aspect object, the configuration information comprising an attribute of the observer;* (Skinner, col.1, line 6 – col.26, line 13)

Skinner discloses, “Within the client and application tiers, data is maintained in the form of data objects. Application server 307 maintains a set of objects containing data for the clients it serves. Clients 300A and 300B each maintain a subset of objects containing data for their respective user needs. Application server 307 is responsible for transforming data from the format of database server 311 into the form of data objects, and, similarly, from the form of data objects into the format of database server 311. Additionally, queries are transformed from a general query object format into the particular query format expected by database server 311, such as SQL” (Skinner, col.14, lines 21-31).

Skinner discloses, “Client-side application logic and GUI component 301A provides the software mechanism by which the user is able to view the data and other output associated with a particular application, to generate input in the form

of additions, deletions and modifications of data, and to otherwise exert control over the data and format of what is displayed. Client-side application logic and GUI component 301A interfaces with client-side change management component 302A, client-side object cache component 303A, client-side update management component 304A and client-side query management component 312A” (Skinner, col.14, lines 50-60). Hence, Skinner teaches of the user utilizing the client 300A (i.e., Applicants’ observer) to create (i.e., Applicants’ generate) by generating input and to maintain subset of objects (i.e., Applicants’ configuration information) containing data for the user’s needs.

- *attaching the aspect object to a subject (Skinner, col.1, line 6 – col.26, line 13)*
Skinner discloses, “FIG. 5A comprises root node 500, which is coupled to a Client A interest object, a Client B interest object and a Client C/Server X interest object. The Client C/Server X interest object refers to an interest object registered with root node 500 for a third client (“Client C”) or another application server (“Server X”). The respective client or server, or a component acting on behalf of the client or server, is registered as an observer of the respective interest object. A group of interest objects 501 are registered under the Client A interest object; a group of interest objects 502 are registered under the Client B interest object, and a group of interest objects 503 are registered under the Client C/Server X interest object. Interest objects for components within the subject application server (i.e., the server containing the present server interest registry) may register with root node 500, and extend via sub-interests. However, interest objects for components of the subject application server are not shown in FIG. 5A for clarity” (Skinner, col.10, lines 47-65). Hence, Skinner teaches of interest

objects (e.g., Client A interest object, Client B interest object) (i.e., Applicants' aspect object) are registered (i.e., Applicants' created) and coupled (i.e., Applicants' adapted for attachment) to root node 500 within the subject application server (i.e., Applicants' subject) by the user via the clients A and B, respectively. Skinner discloses, "*Client-side application logic and GUI component 301A provides the software mechanism by which the user is able to view the data and other output associated with a particular application, to generate input in the form of additions, deletions and modifications of data, and to otherwise exert control over the data and format of what is displayed. Client-side application logic and GUI component 301A interfaces with client-side change management component 302A, client-side object cache component 303A, client-side update management component 304A and client-side query management component 312A*" (Skinner, col.14, lines 50-60). Hence, Skinner teaches of the user utilizing the client 300A (i.e., Applicants' observer) to create or modify (i.e., Applicants' generate) by generating input and to maintain subset of objects (i.e., Applicants' configuration information) containing data for the user's needs.

- *notifying the aspect object of an update;* (Skinner, col.1, line 6 – col.26, line 13)

Skinner discloses, "*FIG. 5A comprises root node 500, which is coupled to a Client A interest object, a Client B interest object and a Client C/Server X interest object. The Client C/Server X interest object refers to an interest object registered with root node 500 for a third client ("Client C") or another application server ("Server X"). The respective client or server, or a component acting on behalf of the client or server, is registered as an observer of the respective*

interest object. A group of interest objects 501 are registered under the Client A interest object; a group of interest objects 502 are registered under the Client B interest object, and a group of interest objects 503 are registered under the Client C/Server X interest object. Interest objects for components within the subject application server (i.e., the server containing the present server interest registry) may register with root node 500, and extend via sub-interests. However, interest objects for components of the subject application server are not shown in FIG. 5A for clarity" (Skinner, col.10, lines 47-65). Hence, Skinner teaches of interest objects (e.g., Client A interest object, Client B interest object) (i.e., Applicants' aspect object) are registered (i.e., Applicants' created) and coupled (i.e., Applicants' adapted for attachment) to root node 500 within the subject application server (i.e., Applicants' subject) by the user via the clients A and B, respectively. Skinner discloses, "*Client-side application logic and GUI component 301A provides the software mechanism by which the user is able to view the data and other output associated with a particular application, to generate input in the form of additions, deletions and modifications of data, and to otherwise exert control over the data and format of what is displayed. Client-side application logic and GUI component 301A interfaces with client-side change management component 302A, client-side object cache component 303A, client-side update management component 304A and client-side query management component 312A*" (Skinner, col.14, lines 50-60). Hence, Skinner teaches of the user utilizing the client 300A (i.e., Applicants' observer) to create or modify (i.e., Applicants' generate) by generating input and to maintain subset

of objects (i.e., Applicants' configuration information) containing data for the user's needs.

- *interrogating the update to generate to generate update information; and selectively communicating the update to the observer based on a comparison between the update information and the configuration information.* (Skinner, col.1, line 6 – col.26, line 13)

Skinner discloses, *"FIG. 5A comprises root node 500, which is coupled to a Client A interest object, a Client B interest object and a Client C/Server X interest object. The Client C/Server X interest object refers to an interest object registered with root node 500 for a third client ("Client C") or another application server ("Server X"). The respective client or server, or a component acting on behalf of the client or server, is registered as an observer of the respective interest object. A group of interest objects 501 are registered under the Client A interest object; a group of interest objects 502 are registered under the Client B interest object, and a group of interest objects 503 are registered under the Client C/Server X interest object. Interest objects for components within the subject application server (i.e., the server containing the present server interest registry) may register with root node 500, and extend via sub-interests. However, interest objects for components of the subject application server are not shown in FIG. 5A for clarity"* (Skinner, col.10, lines 47-65). Hence, Skinner teaches of interest objects (e.g., Client A interest object, Client B interest object) (i.e., Applicants' aspect object) are registered (i.e., Applicants' created) and coupled (i.e., Applicants' adapted for attachment) to root node 500 within the subject application server (i.e., Applicants' subject) by the user via the clients A and B,

respectively. Skinner discloses, "*Client-side application logic and GUI component 301A provides the software mechanism by which the user is able to view the data and other output associated with a particular application, to generate input in the form of additions, deletions and modifications of data, and to otherwise exert control over the data and format of what is displayed. Client-side application logic and GUI component 301A interfaces with client-side change management component 302A, client-side object cache component 303A, client-side update management component 304A and client-side query management component 312A*" (Skinner, col.14, lines 50-60). Hence, Skinner teaches of the user utilizing the client 300A (i.e., Applicants' observer) to create or modify (i.e., Applicants' generate) by generating input and to maintain subset of objects (i.e., Applicants' configuration information) containing data for the user's needs.

However, Skinner does not explicitly disclose,

- *communicating configuration information from the observer to the aspect object, the configuration information comprising an attribute of the observer;*

Collins teaches,

- *communicating configuration information from the observer to the aspect object, the configuration information comprising an attribute of the observer;* (Collins, col.1, line 6 – col.16, line 10)

Collins discloses, "*The system 100 also collects personal information from the user. In the case of telephone access to the system, this information is obtained, for example, by asking the user to press various keys on the telephone keypad to indicate answers to questions asked through the VRU 122. In the case of access*

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via the network 104, the user's information is entered using any known manner using a typical browser application. The personal information obtained can include, but is not limited to, the user's age, sex, the user's gender preference (including "couples"), the user's first name, race, hair color, build of body, and location including city and zip code. The system will also obtain from the user a goal which can be one of "romance," "friendship," "a walk on the wild side," and the like. The system 100 provides the user with a system phone number for a personal voice mail box; voice mail box number" (Collins, col.5, lines 37-48). Hence, Collins teaches of the system 100 (i.e., Applicants' subject) obtaining (i.e., Applicants' generate) personal information (i.e., Applicants' configuration information) that includes (i.e., Applicants' comprising) the age, sex, first name, race, hair color, etc (i.e., Applicants' attribute) of the user via the user interface (i.e., Applicants' observer).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Collins with the teachings of Skinner *"to provide an on-line dating service that always provides users with the ability to perform searches based on user-specified criteria, including location criteria. It is still further desirable to provide an on-line dating service that provides users with at least some search results, regardless of what search criteria they specify"* (Collins, col.2, lines 21-28). Skinner discloses, *"A method and apparatus of performing active update notification is described. Components of an application are able to specify interest in a data object or set of data objects by registering an interest object with an update management component of the application. The interest object specifies the interested application component, as well as the identity*

of one or more data objects or an attribute value or range of values to associate with data objects. When modifications are made to data objects corresponding to the registered interest objects, the interested application component or components receive an update notification from the update management component” (Skinner, col.2, lines 54-65).

However, Skinner and Collins do not explicitly disclose,

- *selectively communicating the update to the observer based on a comparison between the update information and the configuration information.*

Salam teaches,

- *selectively communicating the update to the observer based on a comparison between the update information and the configuration information. (Salam, col.1, line 8 – col.36, line 15)*

Salam discloses, *“More particularly described, the present invention provides a system and methods for accumulating and displaying information items obtained via a computer network such as the Internet and World Wide Web (WWW). The system provides a plurality of selectable expert topics, each expert topic comprising one or more network computer accessible sources of information. A user inputs a user search request, a selection of one of the plurality of expert topics, and update schedule information as to when the user wishes to receive automatic updates to their search. The user search request, a selection of one of the plurality of expert topics, and update schedule information are stored at a web site server” (Salam, col.4, lines 6-17).* Hence, Salam teaches of the system transmitting (i.e., Applicants’ communicate) updates (i.e., Applicants’ update information) to the user (i.e., Applicants’ observer) based on (i.e., Applicants’

selectively) the search request and the update schedule information (i.e., Applicants' configuration).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Salam with the teachings of Skinner and Collins *"to provide an on-line dating service that always provides users with the ability to perform searches based on user-specified criteria, including location criteria. It is still further desirable to provide an on-line dating service that provides users with at least some search results, regardless of what search criteria they specify"* (Collins, col.2, lines 21-28). Skinner discloses, *"A method and apparatus of performing active update notification is described. Components of an application are able to specify interest in a data object or set of data objects by registering an interest object with an update management component of the application. The interest object specifies the interested application component, as well as the identity of one or more data objects or an attribute value or range of values to associate with data objects. When modifications are made to data objects corresponding to the registered interest objects, the interested application component or components receive an update notification from the update management component"* (Skinner, col.2, lines 54-65). Salam discloses, *"Therefore, there is a need for a searching tool that is directed to the problems of finding too much irrelevant information on the Internet as well as managing the volume of information that a user gathers on the Internet"* (Salam, col.3, lines 36-40).

15. With regard to claims 14-17 and 20-22, Skinner, Collins, and Salam disclose,

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- *further comprising selectively modifying the update information based on a comparison between the update and the configuration information.* (Skinner, col.1, line 6 – col.26, line 13; Collins, col.1, line 6 – col.16, line 10; Salam, col.1, line 8 – col.36, line 15)
 - *further comprising accumulating the update information based on the configuration information.* (Skinner, col.1, line 6 – col.26, line 13; Collins, col.1, line 6 – col.16, line 10; Salam, col.1, line 8 – col.36, line 15)
 - *further comprising sending updated configuration information from the observer to the aspect object, wherein the updated configuration information comprises an updated attribute of the observer.* (Skinner, col.1, line 6 – col.26, line 13; Collins, col.1, line 6 – col.16, line 10; Salam, col.1, line 8 – col.36, line 15)
 - *wherein the updated attribute of the observer includes a system load indication.* (Skinner, col.1, line 6 – col.26, line 13; Collins, col.1, line 6 – col.16, line 10; Salam, col.1, line 8 – col.36, line 15)
16. With regard to claims 24-26, Skinner, Collins, and Salam disclose,
- *wherein subject comprises an object and wherein the observer comprises an object.* (Skinner, col.1, line 6 – col.26, line 13; Collins, col.1, line 6 – col.16, line 10; Salam, col.1, line 8 – col.36, line 15)

Conclusion

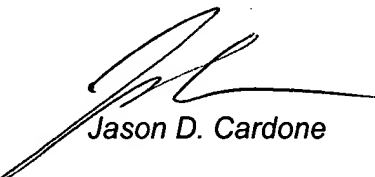
17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Duong whose telephone number is 571/272-3911. The examiner can normally be reached on M-F 7:30AM - 4:00PM. If attempts to reach the

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examiner by telephone are unsuccessful, the examiner's supervisor, Jason D. Cardone can be reached on 571/272-3933. The fax phone numbers for the organization where this application or proceeding is assigned are 571/273-8300 for regular communications and 571/273-8300 for After Final communications.

Thomas Duong (AU2145)

October 25, 2007

A handwritten signature in black ink, appearing to read 'J. Cardone', with a long horizontal stroke extending to the right.

Jason D. Cardone

Supervisory PE (AU2145)